MASS HILLTOPPING OF EARWIGS ON THE TROODOS SUMMIT IN CYPRUS (DERMAPTERA)

TORBEN B. LARSEN

358 Coldharbour Lane, London SW9 8PL.

Introduction

ON 23 OCTOBER 1994 I stopped briefly at the very summit of the Troodos Mountains (c.2000m) from where, on a good day all of Cyprus can be seen. It was obviously too late in the season to hope for any interesting hilltopping butterflies (during four days on the island only *Iphiclides podalirius* L., *Artogeia rapae* L., *Gonepteryx rhamni* L., and *Pararge aegeria* L. were seen). But on reaching the summit, it was found to be full of smaller hilltopping insects, notably a small red ladybird (Coleoptera, Coccinellidae), a small grey stinking bug (Hemiptera), and an earwig *(Forficula lurida* Fischer - a common species centered on Turkey).

Observations on the Troodos Summit

The weather on the day in question was one of hazy sunshine with an air temperature of about 22° Celsius at 2000m. The wind was so fresh that the possibility of small insects hilltopping seemed remote, but the summit was crowded with them, and especially with both sexes of the earwig.

They were seated on south-facing rocks, paths, and roads all over the summit area, and on the cement observation platform, often in little clusters of two to five, but not touching each other. Every so often, an individual would suddenly, and unprovoked, fly off for a couple of small circles and land again in a rather ungainly manner.

I seem to remember reading a book on insects where the author doubted whether earwigs ever flew spontaneously under normal circumstances. These ones certainly did. During the twenty minutes spent on the peak at least fifty take-offs were personally witnessed. Mostly take-off was too fast to see what happened, as was the folding of the wings after the ungainly landings. Only in two cases were the unfolding of their remarkably hinged and folded wings actually witnessed. The flight seemed surprisingly confident, able to withstand the strong wind. At any given time hundreds of earwigs were airborne on the summit.

When not flying, the earwigs generally sat still in the sun, not touching, and not interacting with each other. In one case, only, a pair was seen seated side by side, the male of which had unfolded the wing furthest from the female and appeared to be grooming it with the anal tongs. After a while, he folded the single wing, and then flew away abruptly.

Six individuals were caught by grasping their tongs, in the hope of showing to my companions how the unfolding of the wings looked, but they did not oblige. Immediately on being placed back in their original position, they scuttled off into a dark crevice as earwigs normally do.

Every suitable rock or flat area which the sun reached had several earwigs per square metre. The investigated area covered at least 100 x 100m (10,000m^2), but there must have been earwigs over a larger area than that. A total of 5,000 is an absolute minimum, but the true total must have been considerably higher than that. I made no formal count, but the sex-ratio appeared to be roughly 1:1, the sexes being easily distinguished by the shape of the anal tongs.

Discussion

Hilltopping of this nature is normally seen as a way of allowing the sexes of a species to meet for mating purposes, and this has been carefully documented for both butterflies (Lepidoptera, Rhopalocera) and hoverflies (Diptera, Syrphidae). This may have been so also in the present case; my brief stay was possibly too short to see examples of sexual behaviour.

Another possibility is that the hilltopping constitutes a prelude to communal hibernation. Ladybirds of the type seen are notorious for communal roosting, and often in places where they do not normally live and feed. Many of the small stinking bugs were seen further down the mountain in shady places in very large numbers (more than 100 under the palm-sized ledge of a small rock).

However, a conversation with Judith Marshall on the habits of earwigs in the UK, suggests that both mechanisms may actually be combined, since here females are impregnated in the autumn and hibernate to lay eggs the following spring, while the males die off.

Whatever the reason, the fact remains that the earwigs were hilltopping, that they flew frequently, spontaneously, and quite strongly, and that they were present by the thousands or tens of thousand.

Acknowledgements

My wife, Nancy Fee, and I would like to thank Christos and Stavroulla Demetriou for taking us on the lovely trip through the Troodos where these observations were made. The earwig was kindly determined by Judith Marshall of the Natural History Museum, London.

Pyrausta aurata Scop. (Lep.: Pyralidae) on Wanstead Flats, east London, 1996

I first became aware of the existance of this Pyrale in east London in October 1994, having found larvae on a small cluster of *Mentha* growing in a tiny Plaistow garden on 8.x.1994.

A Heath trap set up on 30.v.1996 on Wanstead Flats, resulted in the capture of a single male. Subsequent examples of the moth, the first